

Earth Science Division
Participation in 2014 Fall AGU

Total Division 1st Author Presentations (oral or poster): 53
Total Division Co-author Presentations (excluding duplicates): 66

Total Presentations 119

Code SG 2014 AGU Fall Meeting

Chirayath, Ved, OS41A-1178, "Fluid Lensing, Applications to High-Resolution 3D Subaqueous Imaging & Automated Remote Biosphere Assessment from Airborne and Space-borne Platforms" (Poster)

Nag, Sreeja, S. Nag, C.K. Gatebe, T. Hilker, F.G Hall, O.L. de Weck, B42C-03, "Measuring Bi-Directional Reflectance for Gross Primary Productivity with a Constellation of SmallSats" (oral)

Susan Kulawik, C. O'Dell, F. Deng, D.B.A. Jones, R. Nelson, V. Payne, A41I-3188, Lower Tropospheric CO₂ from OCO-2 (poster)

Code SGG 2014 AGU Fall Meeting Participants

First Author

Bergman, J., E. Jensen, L. Pfister, and T. Bui, "Trajectory dispersion by unresolved wind variability in the UTLS" (Poster)

Chatfield, R. B., Michal Segal-Rosenheimer, and SEAC4RS, DC3, and ARCTAS Science Teams, "Revised (Mixed effects) estimation for forest burning emissions of gases and smoke, fire/emission factor typologies, and potential remote sensing classification of types for use in ozone and absorbing-carbon simulation" (Poster)

Hillyard, P. W., L. Iraci, J. Podolske, E. Yates, T. Tanaka, C. Roehl, D. Wunch, P. Wennberg, R. Albertson, D. Blake, S. Meinardi, J. Marrero, M. Yang, A. Beyersdorf, S. Wofsy, J. Pittman, and B. Daube, "Calibration of a TCCON FTS at Armstrong Flight Research Center (AFRC) using multiple airborne profiles" (Poster)

Iraci, L., E. Yates, T. Tanaka, M. Roby, W. Gore, C. Clements, N. Lareau, V. Ambrosia, B. Quayle, and W. Schroeder, "Airborne in-situ trace gas measurements of multiple wildfires in California (2013-2014)" (Poster)

Jensen, E., L. Pfister, and the ATTREX Science Team, “Airborne Tropical TRopopause Experiment (ATTREX) 2014 Western Pacific Campaign” (Oral)

Jensen, E., “Sensitivity of cirrus properties to ice nuclei abundance” (Poster)

Kacenelenbogen, M., P. Russell, M. Vaughan, **J. Redemann, Y. Shinozuka, J. Livingston**, and **Q. Zhang**, “Global aerosol typing from a combination of A-Train satellite observations in clear-sky and above clouds” (Poster)

Knobelispiesse, K., and **J. Redemann**, A21D-3055, “Airborne polarimeter intercomparison for the NASA Aerosols-Clouds-Ecosystems (ACE) mission” (Poster)

LeBlanc, S. E., J. Redemann, P. Russell, M. Segal-Rosenheimer, M. Kacenelenbogen, Y. Shinozuka, C. Flynn, B. Schmid, K. Sebastian Schmidt, P. Pilewskie, and S. Song, “Cloud properties retrieved from airborne measurements of transmitted and reflected shortwave spectral radiation” (Poster)

Livingston, J., J. Redemann, Y. Shinozuka, M. Kacenelenbogen, P. Russell, S. LeBlanc, M. Vaughan, R. Ferrare, C. Hostetler, R. Rogers, S. Burton, O. Torres, L. Remer, P. Stier, and N. Schutgens, “Direct aerosol radiative forcing from combined A-Train observations – Preliminary comparisons with AeroCom models and pathways to observationally based all-sky estimates” (Poster)

Pfister, L., E. Jensen, R. Ueyama, and **J. Bergman**, “Patterns of convective influence and temperatures in the Tropical Tropopause Layer during the Airborne Tropical TRopopause Experiment (ATTREX)”. (Poster)

Redemann, J., C. J. Flynn, **Y. Shinozuka, P. B. Russell, M. Kacenelenbogen, M. Segal-Rosenheimer, J. M. Livingston**, B. Schmid, S. E. Dunagan, **R. R. Johnson, S. LeBlanc**, S. Schmidt, P. Pilewskie, S. Song, A11K-08 , “Aerosol properties derived from airborne sky radiance and direct beam measurements in recent NASA and DoE field campaigns” (Oral)

Russell, P. B., M. S. Kacenelenbogen, J. M. Livingston, O. P. Hasekamp, S. P. Burton, G. L. Schuster, M. S. Johnson, **K. D. Knobelispiesse, J. Redemann**, S. Ramachandran, and B. N. Holben, “A multi-parameter aerosol classification method and its application to retrievals from spaceborne polarimetry” (Invited oral)

Russell, P. B., M. Segal-Rosenheimer, B. Schmid, **J. Redemann, J. M. Livingston**, C. J. Flynn, **R. R. Johnson**, S. E. Dunagan, **Y. Shinozuka, M. Kacenelenbogen**, and **R. B. Chatfield**, “In-situ and remote-sensing data fusion using machine learning techniques to infer urban and fire-related pollution plumes” (To be presented by M. Segal-Rosenheimer) (Poster)

Ryoo, J.-M., D. Waliser, D. Waugh, S. Wong, E. Fetzer, and I. Fung, “Classification of atmospheric river events on the U.S. west coast using a trajectory model” (Poster)

Segal-Rosenheimer, M., Y. Shinozuka, J. Redemann, J. Fast, L. Berg, and P. Saide, “Effects of urban and biomass burning sources on downwind aerosol and ozone distributions: Regional scale simulations combined with airborne remote sensing measurements during TCAP and SEAC⁴RS and their link to spaceborne observations” (Poster)

Shinozuka, Y., A. Clarke, A. Nenes, T. Lathem, **J. Redemann**, A. Jefferson, and R. Wood, “Aircraft- and ground-based assessment of the CCN-AOD relationship and implications on model analysis of ACI and underlying aerosol processes” (Oral)

Singh, H. B., E. J. Jensen, L. Pfister, and the ATTREX Science Team, “Overview of the Airborne Tropical TRopopause Experiment (ATTREX)” (Poster)

Tanaka, T., E. L. Yates, L. T. Iraci, M. S. Johnson, J. Lopez, M. Loewenstein, W. Gore, J. Tadic, A. Kuze, and S. Kawakami, “Comparison of airborne measurements of greenhouse gases over Railroad Valley, Nevada to satellite and model results” (Poster)

Ueyama. R., E. Jensen, and L. Pfister, “Trajectory and microphysical modeling of TTL water and clouds”. (Poster)

Co-Author

Avery, M., T. Thornberry, S. Young, S. Woods, Q. Mo, P. Lawson, M. McGill, M. Vaughan, J. Yorks, J. Pelon, G. Diskin, **E. Jensen**, D. Hlavka, D. Winker, D. Fahey, C. Trepte, B. Gandrud, A. Garnier, and A. Rollins, “How much ice is there in the Tropical Tropopause Layer? Observations from the ATTREX mission, from the Global Hawk and from Space” (Oral)

Butterfield, Z., R. Lindenmaier, M. K. Dubey, J. Hedelius, D. Wunch, P. Wennberg, **J. Podolske, L. Iaci, P. Hillyard**, and F. Hase, “Compact solar spectroscopic column CO₂, CH₄, H₂O and HOD observations: Performance evaluation at TCCON sites” (Poster)

Chiang, F., C. Milesi, M. Costa-Gabral, J. Rath, W. Wang, and **J. Podolske**, “Extreme Precipitation in the San Francisco Bay Area: Comparing Downscaling Methodologies’ Skill in Representing Extreme Precipitation in Hindcasts and Differences in Their Projections” (Poster)

Chowdhary, J., B. van Diedenhoven, **K. Knobelspiesse**, B. Cairns, A. Wasilewski, and I. McCubbin, “Case Studies for UV, O₂-A Band and Polarimetric Airborne Remote Sensing Observations of Coastal Waters: Implications for Atmospheric Correction” (Poster)

DiGangi, J., **J. Podolske**, M. Rana, T. Slate, and G. Diskin, “Small-Scale Spatial Variability of Ice Supersaturation and Cirrus in the TTL” (Poster)

Dunagan, S. E., C. Flynn, **R. R. Johnson**, **M. Kacenelenbogen**, **K. Knobelispiesse**, S. LeBlanc, **J. Livingston**, **J. Redemann**, **P. B. Russell**, B. Schmid, **M. Segal-Rosenheimer**, and **Y. Shinozuka**, “Spectrometers for Sky-Scanning, Sun-Tracking Atmospheric Research (4STAR) upgrade to full sun-sky-cloud-trace gas spectrometry capability for airborne science” (Poster)

Guild, L., R. Kudela, S. Hooker, J. Morrow, **P. Russell**, S. Palacios, **J. Livingston**, K. Negrey, J. Torres-Perez, and J. Broughton, “NASA COAST and OCEANIA airborne missions support ecosystem and water quality research in the coastal zone” (Oral)

Hardesty, R., A. Brewer, P. Shepson, M. O. Cambaliza, O. Salmon, A. Heimbigner, K. Davis, T. Lauvaux, L. McGowan, N. Miles, S. Richardson, D. Sarmiento, A. Karion, C. Sweeney, **L. Iraci**, **P. Hillyard**, **J. Podolske**, K. Gurney, I. Razlivanov, Y. Song, J. Turnbull, J. Whetstone, A. Possolo, and K. Prasad, “One year of Doppler Lidar observations characterizing boundary layer wind, turbulence, and aerosol structure during the Indianapolis Flux Experiment” (Oral)

Herman, R., R. Troy, K. Rosenlof, E. Ray, M. Schwartz, W. Read, K. Bedka, D. Fu, L. Christensen, and **T. Bui**, “Characterization of water vapor in the North American monsoon with JLH Mark2 and Aura MLS” (Poster)

Jensen, J., M. Diao, L. Pan, **E. Jensen**, C. Homeyer, S. Honomichl, J. Bresch, and A. Bansemmer, “Dynamical conditions of ice supersaturation and cirrus clouds in the extratropical upper troposphere and lower stratosphere” (Poster)

Jethva, H., O. Torres, L. Remer, **J. Redemann**, S. Dunagan, **J. Livingston**, **Y. Shinozuka**, **M. Kacenelenbogen**, and **M. Segal-Rosenheimer**, “Validating above-cloud aerosol optical depth retrieved from MODIS using NASA Ames airborne sun-tracking photometric and spectrometric (AATS and 4STAR) measurements” (Oral)

Johnson, M., X. Xi, **E. Yates**, **L. Iraci**, C. Potter, **T. Tanaka**, J. Tadic, **M. Loewenstein**, S. Jeong, M. Fischer, and K. Gurney, “Investigating seasonal emissions of carbon dioxide and methane in Northern California using airborne measurements and inverse modeling” (Poster)

Kawakami, S., K. Shiomi, H. Suto, A. Kuze, **P. Hillyard**, **T. Tanaka**, **J. Podolske**, **L. Iraci**, and R. Albertson, “The total column of CO₂ and CH₄ measured with a compact Fourier transform spectrometer at NASA Armstrong Flight Research Center and Railroad Valley, Nevada, USA”, (Poster)

Kuze, A., H. Suto, K. Shiomi, S. Kawakami, F. Schwandner, C. Bruegge, T. Taylor, D. Crisp, **L. Iraci**, and **T. Tanaka**, “CO₂ observation from space from two complementary spectrometers; OCO-2 and GOSAT” (Poster)

Langford, A., C. Senff, R. Alvarez, J. Brioude, O. Cooper, J. Holloway, M. Lin, R. Marchbanks, R. B. Pierce, P. Reddy, S. Sandberg, A. Weickmann, E. Williams, M.

Gustin, **L. Iraci**, T. Leblanc, and **E. Yates**, “Stratospheric contribution to surface ozone in the desert Southwest during the 2013 Las Vegas Ozone Study” (Oral)

Leifer, I., D. Tratt, H. Bovensmann, K. Buckland, J. Burrows, J. Frash, K. Gerilowski, **L. Iraci**, P. Johnson, **R. Kolyer**, S. Krautwurst, T. Krings, J. B. Leen, C. Hu, C. Melton, S. Vigil, **E. Yates**, and M. Zhang, “Husbandry trace gas emissions from a dairy complex by mobile in situ and airborne and spaceborne remote sensing: A Comex campaign focus” (Poster)

Miles, N., T. Lauvaux, K. Davis, S. Richardson, A. Deng, D. Sarmiento, K. Wu, C. Sweeney, A. Karion, R. Hardesty, A. Brewer, J. Turnbull, **L. Iraci**, **P. Hillyard**, **J. Podolske**, K. Gurney, R. Patarasuk, M. O. Cambaliza, P. Shepson, and J. Whetstone, “Greenhouse gas emissions of Indianapolis using a high-density surface tower network and an atmospheric inversion” (Oral)

Morino, I., M. Inoue, Y. Yoshida, N. Kikuchi, T. Yokota, T. Matsunaga, O. Uchino, **T. Tanaka**, D. Sakaizawa, S. Kawakami, S. Ishii, K. Mizutani, Y. Shibata, M. Abo, and C. Nagasawa, “Passive and active remote sensing of greenhouse gases in the GOSAT project” (Oral)

Palacios, S., L. Guild, R. Kudela, S. Hooker, J. Morrow, **P. Russell**, **J. Livingston**, K. Negrey, J. Torres-Perez, and **M. Kacenelenbogen**, “Bringing the ocean into finer focus through the NASA COAST, HyspIRL and OCEANIA suborbital missions” (Poster)

Pieri, D., J. Diaz, G. Bland, M. Fladeland, A. Abtahi, A. Alan, O. Alegria, S. Azofeifa, R. Berthold, E. Corrales, S. Fuerstenau, J. Gerardi, **D. Herlth**, G. Hickman, G. Hunter, J. Linick, Y. Madrigal, D. Makel, T. Miles, V. Realmuto, B. Storms, A. Vogel, **R. Kolyer**, and K. Weber, “Systematic observations of Volcán Turrialba, Costa Rica, with small unmanned aircraft and aerostats (UAVs): the Costa Rican Airborne Research and Technology Applications (CARTA) missions” (Poster)

Randles, C. A., A. da Silva, P. R. Colarco, A. Darmenov, V. Buchard, R. Govindaraju, G. Chen, J. Hair, **P. B. Russell**, **Y. Shinozuka**, N. Wagner, and D. Lack, “Use of the NASA GEOS-5 SEAC4RS meteorological and aerosol reanalysis for assessing simulated aerosol optical properties as a function of smoke age” (Oral)

Rollins, A., T. Thornberry, R.-S. Gao, S. Woods, **T. Bui**, and D. Fahey, “Relative humidity distributions in the Tropical Tropopause Layer measured during NASA ATTREX” (Oral)

Schoeberl, M., A. Dessler, T. Wang, M. Avery, and **E. Jensen**, “Tropical Tropopause Layer cloud formation, convection and stratospheric dehydration” (Oral)

Shepson, P., M. O. Cambaliza, O. Salmon, A. Heimbigner, K. Davis, T. Lauvaux, L. McGowan, N. Miles, S. Richardson, D. Sarmiento, M. Hardesty, A. Karion, C. Sweeney, **L. Iraci**, **P. Hillyard**, **J. Podolske**, K. Gurney, R. Patarasuk, I. Razlivanova, Y. Song, D.

O'Keeffe, J. Turbull, I. Vimont, J. Whetstone, A. Possolo, K. Prasad, and I. Lopez-Coto, "Progress and developments in the Indianapolis Flux Experiment (INFLUX)" (Oral)

Smith, J., M. Sargent, D. Wilmouth, J. Anderson, K. Bedka, R. Herman, J. Pittman, and **E. Jensen**, "A case-study analysis of convectively sourced water vapor plumes in the overworld stratosphere over the continental U.S. observed in situ during the SEAC4RS mission" (Oral)

Song, S., S. Schmidt, P. Pilewskie, S. Platnick, J. Hair, **J. Redemann**, **S. LeBlanc**, **M. Segal-Rosenheimer**, C. Flynn, and B. Schmid, "Understanding the combined cloud-aerosol radiative effect for heterogeneous scenes" (Poster)

Thornberry, T., A. Rollins, R.-S. Gao, D. Fahey, **T. Bui**, and S. Woods, "In situ observations of water vapor and cirrus IWC in the Pacific TTL during ATTREX" (Poster)

Wolfe, G., T. Hanisco, H. Arkinson, **T. Bui**, T. Mikoviny, A. Wisthaler, J. Crounse, J. St Clair, A. Teng, P. Wennberg, L. Ollack, J. Peischl, T. Ryerson, K. Ullmann, and S. Hall, "Airborne eddy covariance fluxes provide novel constraints on sources and sinks of reactive gases in the planetary boundary layer" (Oral)

Kulawik co-author:

A51C-3047 Single-Footprint Retrievals from AIRS, F.W. Irion, ... S.S. Kulawik. Friday, 8 am poster

A41H-3164CO₂ Annual and Semiannual Cycles from Satellite Retrievals and Models, Jiang, ... S.S. Kulawik. Thursday, 8 am poster

A33I-3313Extending the Satellite Data Record of Tropospheric Ozone Profiles from Aura-TES to MetOp-IASI. H. Oetjen, S.S. Kulawik, ... Wednesday, p.m. poster

IN13C-3664 Improved Ozone Profile Retrievals Using Multispectral Measurements from S-NPP and NASA "A Train" Satellites. D. Fu, ... S.S. Kulawik, Monday, p.m. poster

A41G-3141Quantifying Regional Sources and Sinks of CO₂ Using Data From GOSAT and TES, F. Deng, ... S.S. Kulawik, Thursday a.m. poster

A33I-3319Introducing and Validating the New Aura CO Product Derived from Joined TES and MLS Measurements, M. Luo, ... S.S. Kulawik, Wednesday, p.m. poster

A13L-3334Optimal Estimation of the Carbonyl Sulfide Surface Flux Through Inverse Modeling of TES Observations, L. Kuai, ... S.S. Kulawik, Monday poster

Session Convener

A001: Advanced remote sensing techniques and innovative retrieval approaches for characterization of aerosol and cloud properties

Kirk Knobelpiesse, Co-Chair

A11K: Advances in spectral and polarimetric remote sensing and retrieval techniques for the characterization of the atmosphere I

A12A: Advances in spectral and polarimetric remote sensing and retrieval techniques for the characterization of the atmosphere II

A13N: Advances in spectral and polarimetric remote sensing and retrieval techniques for the characterization of the atmosphere III

A21C: Advances in spectral and polarimetric remote sensing and retrieval techniques for the characterization of the atmosphere IV Posters

A21D: Advances in spectral and polarimetric remote sensing and retrieval techniques for the characterization of the atmosphere V Posters

Code SGE 2014 AGU Fall Meeting Participants

First Author

Ambrosia, V., R. Dahlgren, A. Watts and K. Reynolds, "UAS Developments Supporting Wildfire Observations." (poster)

Chang, F., C. Milesi, M. Costa-Cabral, J. Rath, **W. Wang, J. Podolske**, "Extreme Precipitation in the San Francisco Bay Area: Comparing Downscaling Methodologies' Skill in Representing Extreme Precipitation in Hindcasts and Differences in Their Projections" (Poster)

Dahlgren, R., V. Vanderbilt and M. Johnson, "Stress-stimulated Current of Dry Rocks with Constant Clamping Stress." (Poster)

Dunagan, S. E., C. Flynn, R. R. Johnson, M. Kacenelenbogen, K. Knobelispiesse, S. LeBlanc, J. Livingston, J. Redemann, P. B. Russell, B. Schmid, M. Segal-Rosenheimer, and Y. Shinozuka, "Spectrometers for Sky-Scanning, Sun-Tracking Atmospheric Research (4STAR) Upgrade to Full Sun-Sky-Cloud-Trace Gas Spectrometry Capability for Airborne Science" (Poster)

Dungan, J., S. Ganguly, F. Melton, J. Shupe, and R. Nemani, "Preliminary vegetation index products from Suomi NPP VIIRS illuminate the California drought" (Poster)

Ganguly, S., R. Nemani, F. Baret, R. Myneni, **G. Zhang, C. Milesi, and H. Hashimoto**, "Long-term data records of biophysical parameters from multiple satellite systems" (Oral)

Ganguly, S., R. Nemani, S. Basu, S. Mukhopadhyay, **A. Michaelis, and P. Votava**, "Large-scale image analytics using deep learning" (Poster)

Gentry, D., E. Amador, M. Cable, N. Chaudry, T. Cullen, M. Jacobsen, G. Murusekan, E. Schwieterman, A. Stevens, A. Stockton, C. Yin, D. Cullen, and W. Geppert "Field Comparisons of Three Biomarker Detection Methods in Icelandic Mars Analogue Environments" (Poster)

Grace, J. M., S. Ernst, J. Navarrete, and **D. Gentry**, "NEO Targets for Biological *In Situ* Resource Utilization" (poster)

Guild, L., R. Kudela, S. Hooker, J. Morrow, P. Russell, **S. Palacios**, J. Livingston, K. Negrey, **J. Torres-Perez**, and J. Broughton, "NASA COAST and OCEANIA airborne missions support ecosystem and water quality research in the coastal zone" (Oral)

Hashimoto, H., R. Nemani, and W. Wang, "High-resolution climate data over conterminous US using random forest algorithm" (Poster)

Johnson, M., X. Xi, E. Yates, L. Iraci, **C. Potter**, T. Tanaka, J. Tadic, M. Loewenstein, S. Jeong, M. Fischer, and K. Gurney, "Investigating seasonal emissions of carbon dioxide and methane in Northern California using airborne measurements and inverse modeling" (Poster)

Johnson, L., F. Cassel-Sharma, Goorahoo, D. and **F. Melton**, "Calculator for evaluation of crop water use fractions in California" (Poster)

Kumar, U., C. Milesi, K. Raja, **S. Ganguly**, **W. Wang**, **G. Zhang**, and R. Nemani, "On the use of FOSS4G in land cover fraction estimation with unmixing algorithms" (Oral)

Melton, F., A. Guzman, L. Johnson, C. Roosevelt, J. Verdin, J. Dwyer, R. Mueller, A. Zakzeski, P. Thenkabail, C. Wallace, J. Jones, S. Windell, J. Urness, A. Teaby, D. Hamblin, K. Post, and R. Nemani, "Drought impacts on agricultural production in California's Central Valley" (Oral)

Michaelis, A., S. Ganguly, R. Nemani, P. Votava, W. Wang, T. Lee, and **J. Dungan**, "Open NASA Earth Exchange (OpenNEX): Strategies for enabling cross organization collaboration in the earth sciences" (Poster)

Milesi, C., C. Small, U. Kumar, K. Raja, **A. Michaelis**, **G. Zhang**, **S. Ganguly**, **P. Votava**, **W. Wang**, **F. Melton**, **J. Dungan**, **S. Alexander**, and **R. Nemani**, "Mapping Urban Expansion Across North America Using Multi-Temporal Landsat and Nighttime Lights Data" (Poster)

Nguyen, A., C. Mueller, A. Brooks, E. Kislik, O. Baney, C. Ramirez, C. Schmidt and J. Torres-Perez. "Implementing a Web-Based Decision Support System to Spatially Analyze Ecological Conditions of the SIERRA Nevada." (Poster)

Palacios, S., L. Guild, R. Kudela, S. Hooker, J. Morrow, P. Russell, J. Livingston, K. Negrey, **J. Torres-Perez**, and M. Kacenelenbogen, "Bringing the ocean into finer focus through the NASA COAST, HyspIRL and OCEANIA suborbital missions" (Poster)

Reddy, T., "Arctic Sea Ice Extent and Concentrations are Overpredicted by a Regional Coupled Ocean – Sea Ice Model as Compared to Satellite Data" (Poster)

Teaby, A., J. Price, D. Minovitz, L. Makely, J. Torres-Perez, C. Schmidt, L. Guild, and **S. Palacios**, "Monitoring Watershed Water Quality Impacts on Near-Shore Coral Reef Ecosystems in American Samoa using NASA Earth Observations" (Poster)

Torres-Perez, J., M. Barreto-Orta, J. Ortiz, L. Santiago, S. Gebriye Setegn, **L. Guild**, C. Ramos-Scharron, R. Armsrong, and Y. Detres, "Human Impacts to Coastal Ecosystems in Puerto Rico (HICE-PR): A Long-Term Remote Sensing, Hydrologic, Ecologic, and Socio-Economic Assessment with Management Implications" (Poster)

Urbina-Navarrete, J., K. Fujishima, I. Paulino-Lima, B. Rothschild-Mancinelli and L. Rothschild. "Stress-Survival Gene Identification from an Acid Mine Drainage Mat Community." (Poster)

Nemani, R., T. Lee, A. Michaelis, **S. Ganguly**, and **P. Votava**, "Open NASA Earth Exchange (OpenNEX): A public-private partnership for climate change research" (Oral)

Vanderbilt, V., C. Daughtry, L. Biehl and **R. Dahlgren**. "Optical Polarization of Light from a Sorghum Canopy Measured under both a Clear and an Overcast Sky." (Poster)

Votava, P., A. Michaelis, S. Ganguly, and R. Nemani, "Using analytics to support petabyte-scale science on the NASA Earth Exchange (NEX)" (Oral)

Wang, W., R. Nemani, and **H. Hashimoto**, "Variability of Global Atmospheric CO₂ Concentrations over Interannual to Multi-Decadal Timescales: A Linear Approximation" (Poster)

Wilson, K., J. Ely, E. Essoudry, N. Patadia, B. Zajic, J. Torres-Perez and C. Schmidt. "Evaluating Current and Future Rangeland Health in the Great Basin Ecoregion using NASA Earth Observing Systems." (Oral)

Xin Xi, Matthew Johnson, Matthew Fladeland, David Pieri, Jorge, Geoff Bland, G-3284, "Top-Down Estimates of SO₂ Degassing Emissions from the Turrialba Volcano Using In Situ Measurements from Unmanned Aerial Systems and the WRF-Stilt Model("

Zhang, G., S. Ganguly, R. Nemani, C. Milesi, S. Basu, and U. Kumar, "Reducing uncertainties in satellite-derived forest aboveground biomass estimates using a high resolution forest cover map" (Poster)

Co-Author

Basu, S., **S. Ganguly, R. Nemani**, Mukhopadhyay, S., **C. Milesi, P. Votava, A. Michaelis, G. Zhang**, B. Cook, S. Saatchi, and E. Boyda, "Semi-Automated Machine Learning Algorithm for Tree Cover Delineation from 1-m NAIP Imagery Using a High Performance Computing Architecture" (Poster)

Chiang, F., **C. Milesi**, M. Costa-Gabral, J. Rath, W. Wang, and J. Podolske, "Extreme Precipitation in the San Francisco Bay Area: Comparing Downscaling Methodologies' Skill in Representing Extreme Precipitation in Hindcasts and Differences in Their Projections" (Poster)

David, P., J. Diaz, G. Bland, **M. Fladeland**, A. Abtahi, A. Alan, O. Alegria, S. Azofeifa, **R. Berthold**, E. Corrales, S. Fuerstenau, J. Gerardi, **D. Herlth**, G. Hickman, J. Hunter, J.

Linick, Y. Madrigal, D. Makei, T. Miles, V. Realmuto, B. Storms, A. Vogel, **R. Kolyer**, K. Weber, "Systematic observations of Volcán Turrialba, Costa Rica, with small unmanned aircraft and aerostats (UAVs): the Costa Rican Airborne Research and Technology Applications (CARTA) missions" (Poster)

Boyda, E., S. Basu, **S. Ganguly**, **A. Michaelis**, and **R. Nemani**, "Quantum boosting and fast classical metrics for tree cover detection in remote sensing data" (Oral)

Chengquan, H., S. Goward, F. Zhao, K. Schleeweis, K. Rishmawi, J. Masek, W. Cohen, Z. Yang, **J. Dungan**, G. Moisen, and **R. Nemani**, "A Quarter-Century U.S. Forest Disturbance History Mapped from Landsat" (Oral)

Huang, C., S. Goward, F. Zhao, K. Schleeweis, K. Rishmawi, J. Masek, W. Cohen, Z. Yang, **J. Dungan**, G. Moisen, **R. Nemani**, "A Quarter-Century U.S. Forest Disturbance History Mapped from Landsat" (Poster)

Prados, A., P. Gupta, A. Mehta, **C. Schmidt**, B. Blevens, A. Carelton-Hug and D. Barbato. "A Multi-step Approach to Improving NASA Earth Science Data Access and Use for Decision support through Online and Hands-on Training." (Poster)

Schleeweis, K., H. Chengquan, S. Goward, F. Zhao, K. Rishmawi, **J. Dungan**, **A. Michaelis**, **N. Ramakrishna**, J. Masek, C. Toney, G. Moisen, and T. Schroeder, "Using NASA Earth Exchange (NEX) to develop annual US Forest Disturbance products" (Poster)

Wong, N., **J. Grace**, J. Liang, S. Owyang, A. Storrs, J. Zhou, **L. Rothschild**, and **D. Gentry** "The Automated Dynamic Directed Evolution Chamber: A Tool for Studying Extremophile-Environment Interactions in Real Time" (Poster)

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and K. Weber, "Systematic observations of Volcán Turrialba, Costa Rica, with small unmanned aircraft and aerostats (UAVs): the Costa Rican Airborne Research and Technology Applications (CARTA) missions" (Poster)

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Tschudi, M., J. Maslanik, W. Emery, S. Palo, A. Bradley, D. Weibel, C. Zappa, S. Brown, D. Lawrence, **M. Fladeland**, L. Ligon, P. Elstner, **R. Berthold** and J. Adler. "Mizopex – A UAS Arctic Campaign During Summer 2013." (oral)

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Advancing analytics using big data climate information system Posters

R. Nemani, Co-Convener

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F. Melton, Co-Convener